2 Instrumentation and Site Locations

Nine 10-m open-lattice aluminum towers purchased from Universal Manufacturing were deployed at various locations in California for CCOS. Table 1 lists the latitude, longitude, and elevation above mean sea level for each monitoring site while Figure 1 is a graphical depiction of these locations. Each tower was instrumented with a Climatronics F460 cup anemometer and vane that were used to measure wind speed and wind direction, respectively, at 10 m above the ground. Vaisala HMP-45AC probes housed inside R. M. Young multi-plate radiation shields provided air temperature and relative humidity at 2 m. These sensors were sampled once per second and averaged over 5-min intervals by Campbell Scientific CR10 data loggers. The data logger clocks were set to Pacific Daylight Time (PDT). Electrical power needed to run the sensors and data logger was supplied by a rechargeable battery and a 10-W solar panel. A list of manufacturer's addresses, phone numbers, and web links are given in Appendix A. The program used to acquire and store the data for the meteorology towers is listed in Appendix B.

Table 1. Summary of monitoring locations for CCOS.

	Station Name	ID	Lat (N)	Lon (W)	Elev (m)
1	Carrizo Plain	CAR	35° 23.75'	120° 05.12'	658
2	Piedras Blancas	PBL	35° 39.88'	121° 17.08'	5
3	McKittrick	MKT	35° 18.16'	119° 37.30'	390
4	Kettleman City	KET	36° 05.70'	119° 57.02'	103
5	Granite Bay	GRN	38° 44.23'	121° 12.01'	227
6	Suisun City	SUI	38° 13.21'	121° 50.81'	145
7	Point Reyes	REY	38° 05.74'	122° 56.89'	38
8	Shasta Lake	SHA	40° 41.37'	122° 24.14'	361
9	Bella Vista	BEL	40° 37.13'	122° 17.84'	190

These sensors were throughly tested and calibrated before deployment using U. S. Environmental Protection Agency (1995, 2000) guidelines and procedures. These data were automatically transmitted to FRD every 6 hours via phone lines for quality control (QC) screening and archiving. At the end of CCOS, all sensors were checked upon return to FRD.

A Radian 600PA phased-array Doppler sodar and a Radian 924-MHz radar wind profiler and were deployed on the Carizzo Plain to acquire upper-air data. Wind profiles were acquired by the radar and sodar as one-hour averages. These data were also transmitted to FRD for QC screening and archiving.

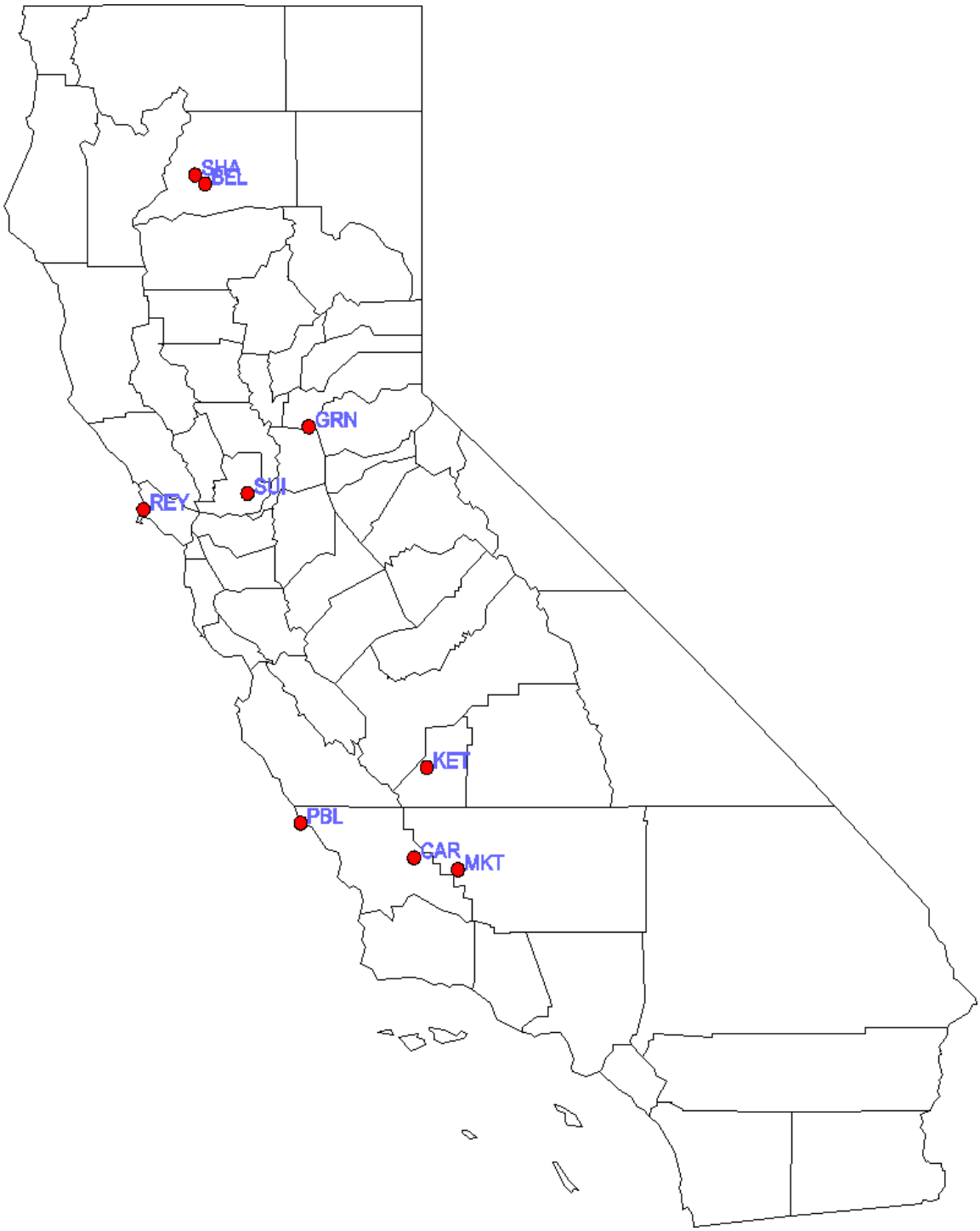

Figure 1. Monitoring locations for CCOS.